

By 15. (amended) The conveyor according to claim 1, characterized in that the at least one portion (21) is a first end portion (21) of the at least one catch element (18), and which further comprises:

a second end portion (48) of the at least one catch element (18), which is remote from the first end portion (21);

a stop surface (49) positioned for engagement with the second end portion (48) of the at least one catch element (18); and

the biasing element (39) normally urging the second end portion (48) into engagement with the stop surface (49) to limit the distance in which the first end portion (21) is urged into the feed path of the head guiding duct (13).

Cancel claims 16 through 26 in their entirety and without prejudice.

REMARKS

Applicants are filing, in this application and on even date herewith, a petition requesting that the period for response to the above-noted Office action be extended by two months to July 1, 2001.

For filing in this application, applicants have attached hereto a certified copy of the priority document, German Application No. 297 19 744.4, which was filed in Germany on November 6, 1997. Applicants have claimed foreign priority benefits under Title 35, United States Code, §119 of this foreign application for patent.

In the above-noted Office action, claims 1, 2 and 7 through 15 have been rejected. Claims 3 through 6 have been previously cancelled in an earlier response paper filed in the USPTO on November 8, 2000, by certificate of mailing, the earlier response paper having been filed in response to an Office action dated June 21, 2000.

Claims 16 through 26 were first introduced by applicants in the above-noted response paper of November 8, 2000, and have been withdrawn from consideration by the Examiner, in the above-noted Office action dated February 1, 2001, under the provisions of 37 C.F.R. § 1.142(b) and MPEP § 821.03.

To place this application in condition for allowance, claims 16 through 26 have been cancelled without prejudice.

Claim 12 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Examiner questions how the positioning segments 9 and 10 have a form corresponding to the cross-section of the feed duct 11.

As illustrated in Fig. 7 of applicants' drawings as originally filed, the feed duct 11 is formed with a head guiding duct 13 and a shank guiding duct 14, with the ducts 13 and 14 being of a shape which is complementary to the shape of the component 12. The component 12 is formed with a shank 42 and a head 47, with the head being supported within the head guiding duct 13 and the shank extending, and being suspended, into the shank guiding duct 14. The component 12 is fed through the feed duct 11 and eventually into the recess 24 (original Fig. 1) formed between the facing sides of the forward ends of the positioning segments 9 and 10.

Referring to original Fig. 5, the component 12 has been fed from the feed duct 11, and is nested between the facing sides of the recess 24 of the positioning segments 9 and 10. As clearly illustrated in original Fig. 5, the facing sides are formed with mirror-image structure which, when placed adjacent each other as shown in Fig. 5, combine to form the recess 24 in a shape which "substantially corresponds" to the cross section of the feed duct 11, as set forth in applicants' claim 12.

With this configuration of the recess 24, the component 12 is supported in the same manner as the component is supported within the feed duct 11. That is, the head 47 of the component 12 is

supported within a portion of the recess 24 which is complementary to the head, and the shank 42 extends, and is suspended, into a portion of the recess which is complementary to the shank.

In addition to the foregoing remarks, applicants note that, on page 5, lines 24 and 25, of the original specification, it is stated that, "The positioning segments preferably have a form corresponding substantially to the cross section of the feed duct." Also, at page 9, lines 19 and 20, of applicants' original specification, it is stated that, "The positioning segments 9, 10 are so designed that they form a portion of the feed duct 11."

With reliance on the above-noted portions of the original specification and drawings, applicants' specification has been amended to provide a clear description of the manner in which the segments 9 and 10 "have a form substantially corresponding to the cross section of the feed duct (11)" as set forth in applicants' claim 12.

In view of the amendment to the specification, and in view of the remarks above, applicants submit that claim 12 now satisfies the requirements of 35 U.S.C. § 112, and hereby requests the withdrawal of the rejection, under § 112, of claim 12.

Claims 1, 2, 7, 8 and 14 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 601,941 (hereinafter "the Brock patent").

Applicants note that, on page 3 of the above-noted Office action, at Section 5, the Examiner refers to various numbers (16, 13, 17, 38, 30 and 31), supposedly in the Brock patent, when comparing applicants claims 1 and 2 with the elements of the Brock patent. Applicants submit that there are no such numbers in the Brock patent. Applicants will proceed to distinguish applicants' rewritten claim 1 over the Brock patent by referring to the letter/number designations used in the Brock patent.

Applicants set forth in rewritten claim 1 "at least one catch element (18)" having "at least one portion (21)" which is "removably extendable into and out of the feed path of the head guiding duct (13)." A biasing element 39 normally urges the at

least one portion 21 movably into the feed path of the duct 13 for engagement with the elongate components 12. The at least one catch element 18 and the at least a portion 21 are mounted for deflected movement against the normal urging of the biasing element 39 upon engagement with the elongate components 12 being fed through the feed path of the duct 13, to allow continued feeding of the components 12 through the feed path.

In the current above-noted Office action, applicants' claim 1 has been rejected under 35 U.S.C. § 102 in each of the seven separate rejections, along with various combinations of the claims depending from claim 1. The features of applicants' rewritten claim 1 are set forth above, in the preceding paragraph. For the purpose of brevity, applicants will not repeat, in its entirety, the above presentation of the features of rewritten claim 1 in the remarks below regarding each of the remaining six rejections, but will make reference to the above presentation thereof.

The Brock patent shows a machine for driving tacks and the like. In particular, on page 3 of the specification of the Brock patent, at lines 65 through 76, it is stated:

"This **impelling device**, as I have chosen herein to illustrate the same, is represented as a **lever r**, Fig. 1, pivoted on the raceway r^1 and acted upon by a spring r^2 , which presses said lever normally into its lowermost position, with the shoulder or downturned end r^3 at its free end lying in the path of movement of the heads of the tacks in the raceway, such shoulder or downturned end r^3 being preferably concaved at its face next the tacks in the raceway to better **receive** and **hold** the head of a tack,...." (Emphasis added)

Therefore, the element r of the Brock patent is a lever and is not a catch element in the context of applicants' rewritten claim 1. Instead, the lever r of the Brock patent, and the adjacent structure, is a part of an impelling device which is designed to "receive and hold" the tacks, and not allow the tacks to pass. The

catch element 18, and adjacent structure, as set forth in applicants' rewritten claim 1, is designed to be deflected and allow the passage of the components 12 upon engagement therewith.

For the foregoing reasons, applicants submit that the Brock patent does not teach or suggest applicants' invention as set forth in rewritten claim 1, and hereby requests that the rejection based thereon be withdrawn.

Claims 2, 7, 8 and 14, which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Brock patent for the same above-noted reasons as to why applicants' claim 1 distinguishes over the Brock patent. For the foregoing reasons, applicants request that the rejection of these claims be withdrawn.

Further, rewritten claim 2 sets forth that the catch element 18 has a locking face 22 which prevents slippage of any elongate component 12 from the transfer region. This feature is not taught by the Brock patent.

Rewritten claim 7 sets forth that the at least one catch element 18 is movable pivotally around an axis 38, and that the biasing element 39 acts on the at least one catch element 18. As rewritten, claim 7 sets forth that the biasing element 39 acts on, and allows movement of, the at least one catch element 18 from the feed path upon engagement with the elongate components 12 passing therethrough. This feature is not taught by the Brock patent.

Rewritten claim 8 sets forth that the at least one portion 21 is a first end of the at least one catch element 18, which also includes a second end, with the axis 38 being located at an intermediate portion of the at least one catch element, and the biasing element 39 is a compression spring, which engages the at least one catch element 18 between the axis 38 and the first end. These features are not taught by the Brock patent.

Rewritten claim 14 sets forth that the at least one resilient element 36 is arranged on the second end portion 35, which is remote from the transfer region 15. This placement of the

resilient element 36 is the most effective location for binding the split sleeve 31 for its intended purpose in the process of moving the elongate components 12 through the conveying duct. This feature is not taught by the Brock patent.

For the foregoing additional reasons, applicants submit that rewritten claims 2, 7, 8 and 14 further distinguish over any teaching of the Brock patent, and hereby request the withdrawal of the rejections of these claims based on the Brock patent.

Claims 1, 2, 9 through 13 and 15 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,022,481 (hereinafter "the Holbrook patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2, 9 through 13 and 15 as being anticipated by the Holbrook patent.

Applicants set forth in rewritten claim 1 that the at least one catch element 18 and the at least one portion 21 are mounted for deflected movement out of the feed path, against the normal urging of the biasing element 39, upon engagement with each of the elongate components 12 being fed through the feed path.

The Holbrook patent shows a system which feeds tacks from a hopper 10, through raceways 16 and 35, to a pocket 38 located at a far end of a raceway 35. A driver 41 is located above the pocket 38 and is movable to drive the tack from the pocket to an anvil 40. To insure that only one tack is fed to, and located in, the pocket 38, a pair of spaced plates 30 and 31 are positioned to be transversely selectively reciprocated with respect to the raceway 16.

The plate 30 is formed with an aperture 32 which is normally out of alignment with the raceway 16 to prevent the tacks from being fed toward the raceway 35 and the pocket 38. Consequently, the tacks are initially conveyed from the hopper 10 toward the plate 30, where the lead tack engages a solid portion of the plate 30 and is precluded from moving further in the raceway 16.

Subsequent tacks are then stacked behind the lead tack. The tacks remain in the stacked arrangement until an external means is selectively operated to move the plate 30 to align the aperture 32 with the raceway 16 and allow the lead tack to move through the aperture.

As the plate 30 is moved, the plate 31 is also moved transversely to the raceway 16 to block the space on the downstream side of the aperture 32, whereby the lead tack, which has just passed through the aperture, is now blocked by the plate 31. When the plates 30 and 31 are returned to their original locations, the lead tack continues to be fed to the pocket 38, and the next lead tack is blocked by the solid portion of the plate 30.

Note that in the Holbrook patent, there is no structure which is responsive to movement of the lead tack into engagement with the plate 30 which initiates the reciprocation of the plates 30 and 31 which allows the lead tack to continue to be fed to the pocket 38. As set forth in applicants' rewritten claim 1, as noted above, the catch element 18 and the portion 21 are mounted for deflected movement out of the feed path, against the normal biasing of the biasing element 39, upon engagement with each of the elongate components 12.

Therefore, applicants submit that, for the foregoing reasons, rewritten claim 1 distinguishes over any teaching of the Holbrook patent, and hereby requests the withdrawal of the rejection of claim 1 based thereon.

Claims 2, 9 through 13 and 15, which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Holbrook patent for the same above-noted reasons as to why applicants' claim 1 distinguishes over the Holbrook patent. Applicants hereby request that the rejection of these claims, based on the Holbrook patent, be withdrawn.

In addition, rewritten claim 2 sets forth a locking face 22 on the catch element 18 which faces in a direction opposite the direction in which the elongate components 12 are fed to prevent

the components from slipping from the transfer region. In the Holbrook patent, if the blocking face of the plate 31 is considered a locking face, it is **not** facing in a direction opposite the direction from which the tacks are fed, and it does **not** prevent the tacks from slipping from the pocket 38.

Applicants set forth in rewritten claim 15 that a second end portion 48, which is remote from the first end portion 21, is urged into engagement with a stop surface 49 to limit the distance in which the first end portion 21 is urged into the head guiding duct 13. This feature is not taught by the Holbrook patent.

For the foregoing additional reasons, applicants submit that rewritten claims 2 and 15 further distinguish over any teaching of the Holbrook patent, and hereby request the withdrawal of the rejections of these claims based on the Holbrook patent.

Claims 1, 2, 7 and 14 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,203,554 (hereinafter "the Brackett patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2, 7 and 14 as being anticipated by the Brackett patent.

The Brackett patent teaches a nailing machine which feeds nails from a hopper 42, through a raceway 43, where a hold-back 75 literally stops the feed of the nails. A spring 92 pulls on an arm 93 and holds an arm 91 against a cam, tending to press the hold-back 75 down toward the nails (Page 3, lines 44 through 47 of Brackett patent), to preclude feeding of the nails beyond the hold-back.

Periodically, a **cam 82** actuates the hold-back 75, where the hold-back is retracted by such external means as the cam 82 (and not by the presence of a leading nail being fed through the raceway 43) to allow the lead nail to be moved into a lateral recess 46, which is above a conveying tube 38. The tube 38 is sized in a

cylindrical-like fashion to allow the lead nail to freely fall to a location at the base of the tube 38, where the lead nail is held by pivoted jaws 39, which are urged together by springs 40. At this time, a driver 32 is actuated and moved through the tube 38, and engages and drives the lead nail from the pivoted jaws 39.

The Brackett patent does not teach the mounting of a catch element and one portion thereof for deflected movement out of a feed path upon engagement with each elongate component in the manner set forth in applicants' rewritten claim 1.

For the foregoing reasons, applicants submit that the Brackett patent does not teach or suggest applicants' invention as set forth in rewritten claim 1, and hereby requests that the rejection based thereon be withdrawn.

Claims 2, 7 and 14, which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Brackett patent for the same above-noted reasons as to why applicants' claim 1 distinguishes over the Brackett patent. For the foregoing reasons, applicants request that the rejection of these claims be withdrawn.

Further, rewritten claim 2 sets forth that the catch element 18 has a locking face 22, which faces in a direction opposite the direction in which the elongate components 12 are being fed to the transfer region and the pocket 38, prevents slippage of any elongate component 12 from the transfer region. This feature is not taught by the Brackett patent. Instead, the lead nail of the Brackett patent is allowed to continue through the raceway 43 after the withdrawal of the hold-back 75, whereafter the lead nail is moved into the recess 46 and falls through the tube 38, and there is no presentation of a locking face during this travel of the lead nail.

Rewritten claim 7 sets forth that the at least one catch element 18 is movable pivotally around an axis 38, and that the biasing element 39 acts on the at least one catch element 18. As rewritten, claim 7 sets forth that the biasing element 39 acts on, and allows movement of, the at least one catch element 18 from the

feed path upon engagement with the elongate components 12 passing therethrough. This feature is not taught by the Brackett patent.

Rewritten claim 14 sets forth that the conveying duct 16 is formed with a cross section which tapers conically from the first end portion 34 to the second end portion 35. This feature is not taught by the Brock patent. The comparable conveying duct in the Brackett patent is the tube 38. There is no language in the specification, and no showing in the drawings, of the Brackett patent which indicates that the tube 38 is tapered. In fact, Fig. 8 shows the tube to be cylindrical. The pivoted jaws 39 are nothing more than a shell **outside** of the tube 38.

For the foregoing additional reasons, applicants submit that rewritten claims 2, 7 and 14 further distinguish over any teaching of the Brackett patent, and hereby request the withdrawal of the rejections of these claims based on the Brackett patent.

Claims 1, 2, 7 through 10 and 15 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,964,661 (hereinafter "the Schmidt et.al. patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2, 7 through 10 and 15 as being anticipated by the Schmidt et.al. patent.

As shown in the Schmidt et.al. patent, Fig. 4 is a bottom view of a portion of an apparatus for conveying elements 10 through a chute 28, then into a cavity 105 and eventually into a lower station 16. The elements 10 are **not** in the plane of a spring-biased member 106, and do **not** engage the spring-biased member 106 **at any time** during the feeding of the elements from the chute 28 to the lower station 16.

The spring-biased member 106 is, for the most part, in the plane of a pusher/projection 60 of a slide bar 48 (Fig. 3). When the slide bar 48 is selectively moved, the pusher/projection 60 pushes the lead element 10, exiting from the chute 28, from a rear point 30 to an intermediate point 120 midway toward the lower

station 16. As the pusher/projection 60 is moved from the position shown in Fig. 4, the pusher/projection pushes the lead element 10 toward the intermediate point 120. Eventually, the pusher/projection 60 engages a camming surface 112 of the member 106 and pushes the member aside, against the biasing action of a spring 110, to allow the pusher/projection to move past the member. Note again that the lead element 10 is not in the plane of the member 106.

After the lead element 10 has been pushed to the intermediate point 120, the slide bar 48 is retracted, whereby the pusher/projection 60 is moved toward a front cam surface 114 of the member 106. Eventually, a rear camming surface 116 of the pusher/projection 60 engages the front cam surface 114 of the member 106 whereby the member is structurally precluded from moving and the pusher/projection is thereby cammed downward out of the path which includes the next lead element 10. After the pusher/projection 60 passes below the next lead element 10, the pusher/projection returns to the plane of the next lead element as shown in Fig. 4 in preparation for pushing the next lead element toward the intermediate point 120.

Support for the above partial description of the apparatus of the Schmidt et.al. patent can be found in the specification at column 4, lines 17 through 39, column 5, lines 67, 68 and continuing through column 6, lines 1 through 17.

Therefore, for the foregoing reasons, the Schmidt et.al. patent is totally lacking in any teaching of applicants' invention (1) as set forth in rewritten independent claim 1, (2) as set forth in claims 2, 7 through 10 and 15 by virtue of their dependency from claim 1, and (3) as set forth in dependent claims 2, 7 through 10 and 15 on their own merits.

Applicants submit that, for the foregoing reasons, their claims 1, 2, 7 through 10 and 15 distinguish over the Schmidt et.al. patent and hereby request the withdrawal of the rejections of these claims based on the Schmidt et.al. patent.

Claims 1, 2, 7, 9, 11, 12 and 13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,878,954 (hereinafter "the Troske patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2, 7, 9, 11, 12 and 13 as being anticipated by the Troske patent.

The Troske patent shows a button registering and attaching machine, which feeds buttons B through a vertical track extension 15 to a horizontal lower track extension 15a. There is no indication as to how the button B is stopped in the horizontal lower track extension 15a. In any event, the button B does **not** engage any "catch element" when being fed through the track 15/15a, in the manner set forth in applicants' rewritten claim 1.

Thereafter, a pusher/feeder slide 44 is moved from a neutral position, as shown in Fig. 2, to an intermediate position beneath the pre-positioned non-moving button B in the track extension 15a, and attaches to the button. The slide 44, with the attached button B, is then moved to its forwardmost position, as shown in Fig. 1, to deposit the button at an orienting station. It is stated in the specification of the Troske patent, at column 3, lines 3 through 6, that:

"The pusher slide 44 picks up a single button B from the lower portion 15a of the track extension 15 and carries it into the orienting station defined by the larger wheel 28 and two smaller wheels 30 and 31. In this operation the idler wheels 30 and 31 yield outwardly to permit the button to snap into position."

Thereafter, a release slide 48, which is located above the lower track extension 15a as shown in Figs. 1 and 2, is moved downward to so that a depressor pad 48a engages and depresses a trip pin 47 on the slide 44. This results in the slide 44 being

lowered from engagement with the button B and returned to the neutral position, shown in Fig. 2, away from the track extension 15 and the orienting station.

Note that the release slide 48 and the depressor pad 48a are maintained in a withdrawn position, away from the track extensions 15 and 15a during the period when the button B is fed through the track extensions. In fact, the release slide 48 and the depressor pad 48a are **never** positioned to extend into the track extensions 15 and 15a at any time, such as the manner in which the "catch element (18)" extends into the "feed path of the head guiding duct (13)" as set forth in applicants' rewritten claim 1.

Further, in the Troske patent, a setting punch 12, above the orienting station, is lowered so that two cam-controlled fingers 52, carried by the punch, grasp the button B and move the button to an assembly station where the punch clinches a tack T within the button.

The Examiner has likened the finger-release slide 48 of the Troske patent to the catch element 18 as set forth in applicants' rewritten claim 1. Actually, as noted above, the slide 48 and the depressor pad 48a of the Troske patent do not enter, at any time, the track extensions 15 and 15a, and are only operative **after** the button B has been moved to the orienting station, to depress the trip pin 47, which results in the eventual withdrawal of the slide 44 from its forwardmost position.

In addition, the Examiner has likened a bell-crank lever 50 to the biasing element 39 set forth in applicants' claim 1. The finger-release slide 48 supports a pin 48c which is located in a slot in the end of the bell crank lever 50. Under the control of a cam, the lever 50 is oscillated in a timed relation to control the movement of the slide 48. Thus, the lever 50 is not a biasing element. And even if the lever 50 could be considered "a biasing element," the lever does not urge the slide 48 and depressor pad 48a into the track extensions 15 and 15a.

The Troske patent does not teach the mounting of a catch element and one portion thereof for deflected movement out of a feed path upon engagement with each elongate component in the manner set forth in applicants' rewritten claim 1.

For the foregoing reasons, applicants submit that the Troske patent does not teach or suggest applicants' invention as set forth in rewritten claim 1, and hereby requests that the rejection based thereon be withdrawn.

Claims 2, 7, 9, 11, 12 and 13 which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Troske patent for the same above-noted reasons as to why applicants' claim 1 distinguishes over the Troske patent. For the foregoing reasons, applicants request that the rejection of these claims be withdrawn.

The Examiner contends that the a face of the "catch" (slide 48) limits the "transfer region" (the orienting station), as recited in applicants' rewritten claim 2. Applicants submit that the slide 48 and the depressor pad 48a are not located, at any time, any where near the orienting station, in the manner that the locking face 22 is situated as set forth in applicants' rewritten claim 2.

The Examiner contends that the "catch element" of the Troske patent **pivots** about an axis 48c, in the context of applicants' rewritten claim 7. The numeral 48c actually identifies a pin mounted in the open end of the bell crank lever 50. The so-called "catch element" 48 of the Troske patent is actually the finger-release slide 48, which does not "pivot" about anything in a manner as set forth in applicants' claim 7, but reciprocates vertically within a confined slot 48b.

Applicants' set forth in claim 11 that the positioning segments 9 and 10 are **each** pivotal round a respective axis. The Troske patent shows a first orienting wheel 28, which "is power-driven in a mounting which is pivoted on bracket 14." Two idler wheels 30 and 31 are mounted on spring loaded blocks 32 and 33 to

provide a three-point contact against the button B. There is no teaching in the Troske patent that either of the wheels 30 and 31 are pivoted in the manner set forth in applicants' amended claim 11.

Applicants' set forth in claim 12 that the positioning segments 9 and 10 have a form substantially corresponding to the cross section of the feed duct 11. When combining the illustrations of the track extensions 15 and 15a, as shown in Figs. 1, 2 and 5 of the Troske patent, it is apparent that the cross section of the track extensions is a T-shaped configuration. When viewing Fig. 3 of the Troske patent, it is further apparent that the wheels 28, 30 and 31 combine to form a three-point contact with the button B, and do **not** combine to form a T-shaped configuration. Therefore, contrary to the Examiner's statement, any combination of two of the three wheels 28, 30 and 31, or for that matter all three wheels, can not have a form substantially corresponding to the cross section of the track extensions 15 and 15a, in the manner set forth in applicants' amended claim 12.

Applicants' claim 13 sets forth that the positioning segments 9 and 10 are structured to form a continuation of the feed duct 11. As shown in applicants' Figs. 1, 5 and 6, the segments 9 and 10 are formed with a feed track which is structured to be a continuation of the feed duct 11. In the Troske patent, the segments, which are identified by the Examiner as "positioning elements (30,35)," is an idler wheel 30 and a U-shaped yoke 35, are not "structured" to form a continuation of the track extensions 15 and 15a, in the manner in which the positioning segments 9 and 10 are set forth in applicants' claim 13.

Therefore, for the foregoing reasons, the Troske patent is totally lacking in any teaching of applicants' invention (1) as set forth in rewritten independent claim 1, (2) as set forth in claims 2, 7, 9, 11, 12 and 13 by virtue of their dependency from claim 1, and (3) as set forth in dependent claims 2, 7, 9, 11, 12 and 13 on

their own merits. Applicants hereby request the withdrawal of the rejections of claims 1, 2, 7, 9, 11, 12 and 13 based on the Troske patent.

Claims 1, 2 and 14 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,319,348 (hereinafter "the Richards et.al. patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2 and 14 as being anticipated by the Richards et.al. patent.

The Richards et.al. patent shows a nailing machine in which nails 20 are fed from a hopper 66, through a raceway 64, to a station where the lead nail is in engagement with (1) a hooked end portion 196 of an arm 194, (2) by surfaces 174 of fingers 170, and (3) by surfaces 172 of the fingers. (See page 8, left column, lines 46 through 55). Note that the lead nail 20 does not engage and deflect any elements in the feed path of the raceway 64 in the manner set forth in applicants' rewritten claim 1.

By operator control, the machine is operated to mechanically rock a lever 146 to move a member 152 so that the fingers 170, by engagement with the lead nail 20, pushes the lead nail from under the hooked end portion 196 of the arm 194, through an opening 220 in a nail receiving block 98 and into a passage 100 formed in the block. Thereafter, a driver 102 is lowered through the passage 100 of the nail receiving block 98 and pushes the lead nail 20 into a sole 22 of a shoe 24.

Note that the hooked end portion 196 is urged against the lead nail 20 by a spring 200 when the lead nail is in the raceway 64. Therefore, the presence and forward movement alone of the lead nail 20 into engagement with hooked end portion 196 is not sufficient to deflect the arm 194 in the manner set forth in applicants' rewritten claim 1.

It is effectively stated in the specification of the Richards et.al. patent at page 5, right column, lines 9 through 15, that while the fingers 170 are pushing the lead nail from the raceway 64 toward the nail receiving block 98, the arm 194 is "yielding against the action of the spring 200." However, even during the pushing action of the fingers 170, the end portion 196 remains in engagement with the lead nail as indicated in the specification of the Richards et.al. patent at page 5, right column, lines 15 through 19 where it is stated, "During the movement of the nail, the portion 196 of the arm 194 bears against the head of the nail with considerable pressure, thus facilitating the controlling of the nail by the fingers 170 of the block 164."

Therefore, the Richards et.al. patent does not teach a catch element, located in the feed path of components, which is mounted for deflected movement from the feed path upon engagement with the components being fed through the feed path in the manner set forth in applicants' rewritten claim 1.

Further, the portion 196 of the arm 194, and the fingers 170 of the block 164, remain in engagement with lead nail during the pushing of the lead nail from the raceway 64 to the opening 220 of the nail receiving block 98 and, therefore, can not be considered to provide a locking face in the manner set forth in applicants' rewritten claim 2.

For the foregoing reasons, applicants submit that the Richards et.al. patent does not teach or suggest applicants' invention as set forth in rewritten claim 1, and hereby requests that the rejection based thereon be withdrawn.

Claims 2 and 14 which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Richards et.al. patent for the same above-noted reasons as to why applicants' claim 1 distinguishes over the Richards et.al. patent. For the foregoing reasons, applicants request that the rejection of these claims be withdrawn.

For the foregoing additional reasons regarding the locking face 22, applicants submit that rewritten claim 2 further distinguishes over any teaching of the Richards et.al. patent, and hereby requests the withdrawal of the rejections of claim 2 based on the Richards et.al. patent.

Claims 1, 2, 14 and 15 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,171,029 (hereinafter "the Geldhof patent").

As noted above, the features of applicants' rewritten claim 1 are set forth above, and while they are not repeated here, such features of claim 1 are applicable in the following discussion of the rejection of claims 1, 2, 14 and 15 as being anticipated by the Geldhof patent.

The Geldhof patent shows a pneumatic tool which, in one instance, applies rivets to a workpiece. In particular, the tool includes a hopper 28 for feeding rivets 16 to a guideway 29/30 formed by a backing strip 29, and a pair of spaced parallel retainer strips 30, which are attached to one longitudinal face of the backing strip. Washers 31a are interposed between the backing strip 29 and the attached spaced pair of retainer strips 30 to provide a space for receipt of a head of each rivet 16 being fed therethrough. A portion of the shank of each rivet 16, which is contiguous with the head thereof, is fed through a longitudinal slot formed by the space between the spaced retainer strips 30.

The rivets 16 are fed through the guideway 29/30 toward a rivet holder 17/18 formed by a pair of engaged jaws 17, which are urged together by a pair of spring arms 18. A rivet feed controller 33 is located adjacent, but **outside** of, the guideway 29/30 and is spaced slightly from an at-rest location of the rivet holder 17/18. As the rivets 16 advance through the guideway 29/30, the remaining greater portion of the shank of the lead rivet, which is outside of the guideway 29/30, engages the feed controller 33, and is precluded from travelling any further toward the at-rest rivet holder 17/18. Note that, unlike the catch element 18 which is located in the feed path of the elongate components 12, as set forth in applicants' rewritten claim 1, the feed controller 33 is

outside of the guideway 29/30 and is not mounted to be, and is not, deflected upon engagement with the lead rivet 16.

For purposes of description, assume that one of the rivets 16 has been previously assembled in the rivet holder 17/18, and that the next step in the operation of the tool is to assemble the held rivet with a workpiece 7a.

The rivet holder 17/18 is coupled to a dolly 6 which is coupled to and extends from a rod 3 of a piston 1. A movable carrier 20 is mounted for sliding movement on the rod 3, and is normally biased in a forward direction by a spring 35. However, an annular head 37, mounted on the rod 3, prevents the carrier 20 from moving forward when the rod is in the retracted position. Also, the feed controller 33 is attached to the carrier 20 for movement therewith.

With the rivet 16 mounted in the rivet holder 17/18, the piston 1 is operated by control of an operator, whereby the rod 3 is moved forward. With this movement, the annular head 37 is moved forward to allow the carrier 20 to slide forward under the bias of the spring 35. As the carrier 20 moves forward, the feed controller 33 is moved forward and away from the previously engaged portion of the shank of the lead rivet 16. Also, upon movement of the rod 3, the rivet holder 17/18 moves toward the workpiece 7a (Fig. 2). Eventually, the feed controller 33 has been moved away from engagement with the lead rivet 16 in the guideway 29/30. The carrier 20 eventually engages a stop 36, but the rod 3 and dolly 6 are allowed to continue to move to effect the assembly of the rivet 16 with the workpiece 7a.

Note, unlike the catch element 18 being mounted for deflection by the arrival of the moving lead component 12, as set forth in applicants' rewritten claim 1, the controller 33 of the Geldhof patent is not moved (or deflected), in any way, by engagement with the arriving lead rivet 16, but is moved independently of the lead rivet and **only** upon movement of the carrier 20 (to which the controller is attached).

As the feed controller 33 is moved away from the lead rivet 16 in the guideway 29/30 by movement of the carrier 20, the lead rivet is released and will travel to the end of the guideway and locate on the top of the dolly 6, with a portion of the head of the lead rivet remaining in the guideway. When the operator controls the tool to move the piston 1, the rod 3, the dolly 6 and the rivet holder 17/18 in the reverse direction, the lead rivet 16, which is now located on the top of the dolly 6, clears the dolly 6 and is registered within entrance slots 25 of the rivet holder, and drops into a chamber 24 thereof which is formed by the jaws 17.

In the rejection of claim 1, the Examiner contends that the feed controller 33 and the spring 35 are comparable to the catch element 18 and the biasing element 39, respectively. As set forth in rewritten claim 1, the catch element 18 is normally urged **into** the feed path of the components 12 by the biasing element 39, and is mounted for deflected movement out of the feed path upon engagement with each component 12. As noted above, the feed controller 33 is not mounted for movement out of the feed path upon engagement with each rivet 16, but is only movable upon forward movement of the carrier 20. Further, in the rest position, the carrier 20 is **always** being urged forward by the spring 35, but the carrier can not move forward, because of the position of the annular head 37, until the rod 3 is moved forward. Consequently, the feed controller 33, being attached to the carrier 20, is also **always** being urged forward and thereby being urged **out of the feed path of the rivets 16**, which is the exact opposite of the purpose of the biasing element 39 as set forth in applicants' rewritten claim 1.

For the foregoing reasons, applicants submit that the Geldhof patent does not teach or suggest applicants' invention as set forth in rewritten claim 1, and hereby requests that the rejection based thereon be withdrawn.

Claims 2, 14 and 15, which depend directly or indirectly from rewritten claim 1, are allowable over any teaching of the Geldhof patent for the same above-noted reasons as to why applicants' claim

1 distinguishes over the Geldhof patent. For the foregoing reasons, applicants request that the rejection of these claims be withdrawn.

With respect to the rejection of claim 2 as being anticipated by the Geldhof patent, the Examiner states that "A face of the catch limits the transfer region, as recited in claim 2." The Examiner has indicated that the feed controller 33 of the Geldhof patent is comparable to the locking face 22 of the catch element 18. As illustrated in the Geldhof patent, the feed controller 33 is spaced from the rivet holder 17/18 and the dolly 6, and does not teach applicants' invention as set forth in rewritten claim 2.

With respect to the rejection of claim 15 as being anticipated by the Geldhof patent, the Examiner states that "A second end (on 21) of the catch engages a stop (36) to limit the catch movement, as recited in claim 15." Actually, the number 21, in the Geldhof patent, identifies a lug which is attached to the carrier 20, and which engages a stop 36 to limit the movement of the carrier. The feed controller 33, which the Examiner likens to the catch element 18 as set forth in applicants rewritten claims 1 and 15, is attached to the carrier 20 and moves **away from**, and is distant from, the guideway 29/30 when the lug 21 engages the stop 36.

In effect then, the teaching in the Geldhof patent is that the stop 36 determines the distance the feed controller 33 is allowed to move **away from** the guideway 29/30. This is the exact opposite of applicants' invention as set forth in claim 15, where the stop 47 determines the distance which the first end portion 21 is allowed to be urged **into** the feed path of the duct 13.

For the foregoing additional reasons regarding the stop surface 47, applicants submit that rewritten claim 15 further distinguishes over any teaching of the Geldhof patent, and hereby requests the withdrawal of the rejections of claim 2 based on the Geldhof patent.

Therefore, for the foregoing reasons, the Geldhof patent is totally lacking in any teaching of applicants' invention (1) as set

forth in rewritten independent claim 1, (2) as set forth in claims 2, 14 and 15 by virtue of their dependency from claim 1, and (3) as set forth in dependent claims 2, 14 and 15 on their own merits.

Applicants submit that their claims 1, 2, 14 and 15 distinguish over the Geldhof patent and hereby request the withdrawal of the rejections of these claims based on the Geldhof patent.

The references cited by the Examiner in the above-noted current Office action, which were not applied in any of the seven rejections, are distinguished over by applicants' remaining active claims for the same reasons expressed above with respect to the seven rejections.

Applicants submit that, for the foregoing reasons, applicants' claims 1, 2 and 7 through 15 are allowable, and hereby request such allowance.

Applicants submit further that this application is in condition for allowance and such allowance is hereby solicited.

The following amended claims 1, 2, 7, 8, 14 and 15, including the bracketing and underlining format, show the changes being proposed to the respective claims:

1. (Twice amended) A conveyor for elongate components (12) designed with a head (41) and a shank (42), with a feed arrangement (7), for feeding the components in a prescribed direction, comprising a transfer arrangement (8) with a transfer region (15) [in which] into which the elongate components (12) are fed from a feed duct (11) comprising a head guiding duct (13) having a feed path for the heads (41), and a shank guiding duct (14) [is] with the ducts (13) and (14) being in communication with a conveying duct (16) [in] into which [a component] the components (12) can be [positioned] moved from the transfer region (15), characterized by the transfer arrangement (8) which comprises:

[at least one catch element (18) having a first end portion (21) and a second end portion (46) spaced from the first end portion;

the at least one catch element (18) being mounted for movement;

the] at least one catch element (18) extending along, and adjacent, the head guiding duct (13) generally in the prescribed direction of the feeding of the elongate components (12); [and]

at least one portion (21) of the at least one catch element (18) being removably extendable into and out of the feed path of the head guiding duct (13);

a biasing element (39) positioned to normally urge the at least one portion (21) of the at least one catch element (18) movably into the feed path of the head guiding duct (13) for engagement with the elongate components (12) being fed therethrough; and

the at least one catch element (18) and the at least one portion (21) thereof being mounted for deflected movement out of the feed path of the head guiding duct (13) against the normal urging of the biasing element (39) upon engagement with each of the elongate components (12) being fed through the feed path of the head guiding duct (13) to allow continued feeding of the elongate components (12) through the feed path.

2. (twice amended) [Conveyor] The conveyor according to claim 1, characterized in that the at least one catch element (18) has a locking face (22) facing in a direction opposite the prescribed direction and at least partially limiting the transfer region (15) to prevent any elongate component (12), which has passed into the transfer region (15), from slipping therefrom.

7. (twice amended) The conveyor according to claim 1, characterized in that the at least one catch element (18) is movable pivotally around an axis (38) and the biasing element (39) acts on, and allows movement of, the at least one catch element from the feed path upon engagement with the elongate components (12) passing through the feed path.

8. (twice amended) The conveyor according to claim 7, characterized in that the biasing element (39) is a compression spring, [which] the at least one catch element (18) is formed with the at least one portion (21), which is a first end, and a second end (48), and the axis (38) is located at an intermediate portion of the at least one catch element between the first end and the second end thereof, and the compression spring is arranged to engage the at least one catch element (18) between the axis (38) and the first end of the at least one catch element.

14. (twice amended) The conveyor according to claims 1 or 9, [1] characterized in that the conveying duct (16) is formed by a split sleeve (31) which comprises a first end portion (34) adjacent the transfer region (15) and a second end portion (35) remote from the transfer region (15) an at least one resilient element (36) is arranged on the second end portion (35), the cross section of the conveying duct (16) tapering conically substantially from the first end portion (34) to the second end portion (35) and being enlargeable against the action of the element (36).

15. (amended) The conveyor according to claim 1, characterized in that the at least one portion (21) is a first end portion (21) of the at least one catch element (18), and which further comprises:

a second end portion (48) of the at least one catch element (18), which is remote from the first end portion (21);

a stop surface [(47) is] (49) positioned for engagement with the second end portion [(46)] (48) of the at least one catch element (18); and

the biasing element (39) normally urging the second end portion (48) into engagement with the stop surface (49) to limit the distance in which the first end portion (21) is urged into the feed path of the head guiding duct (13).

If the Examiner wishes to discuss any aspects of this response, or any other aspects of this application, the Examiner should call applicant's representative, J. Bruce Hoofnagle, at (410) 442-2417.

Respectfully submitted,

A handwritten signature in cursive script that reads "J. Bruce Hoofnagle".

J. Bruce Hoofnagle
Attorney for Applicant
Reg. No. 20,973

June 5, 2001

J. Bruce Hoofnagle - TW199
The Black & Decker Corporation
701 East Joppa Road
Towson, MD 21286
Phone: (410) 442-2417

5196us2.amd